

Manual

Barryvox® Maintenance Software 2.0

Version 1.0 - January 2025



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This manual describes the operation of the Barryvox Maintenance Software 2.0 and the associated Maintenance Tools. The software and maintenance tools offer organizations, dealers and Mammut Service Centers an efficient way to manage, configure and test Barryvox devices. The first chapter deals with the maintenance tools, i.e. the hardware. The second chapter deals with the Barryvox Maintenance Software and its functions. Additional documents such as the reference manuals for all Barryvox devices and an overview of the compatibility between Barryvox devices and maintenance tools are available on [Barryvox.com](https://www.barryvox.com).

1 Barryvox Maintenance Tools

The following hardware is available for managing and maintaining Barryvox devices in conjunction with the Maintenance Software 2.0:

1.1 USB-Stick for Barryvox 2 & S2

The USB stick is compatible with the Barryvox 2 and S2 models. It acts as a convenient USB adapter for wireless communication with multiple Barryvox devices simultaneously. This stick is particularly suitable for organizations and dealers who want to achieve effective fleet management and perform firmware updates efficiently.



1.2 Tester 2.0

The Barryvox Tester 2.0 is compatible with the Barryvox 2 and S2 models. The Barryvox 2/S2 adapter is required for use with these devices. In addition to the functions of the USB stick for Barryvox 2 & S2, the tester 2.0 enables a comprehensive function test that measures and logs all safety-relevant parameters. It is therefore particularly suitable for dealers, organizations and rental companies who want to carry out maintenance work on Barryvox devices.



1.3 Barryvox 2/S2 Adapter

The Barryvox 2/S2 adapter enables the Barryvox 2 and Barryvox S2 to be connected to the Tester 2.0. To connect the adapter, align the tester so that the Mammut logo is facing you. Now hold the adapter over the tester with the logo facing you. Hook the rear part of the adapter onto the upper edge of the tester so that it grips the upper plastic edge of the tester. Make sure that the contacts of the tester engage with the underside of the adapter. Then press the front of the adapter downwards until the two front hooks also enclose the plastic edge of the tester and click into place. The tester and adapter are now ready for use. For the function test, the Barryvox is plugged onto the contacts of the adapter with the battery compartment empty and open, see Figure 2.

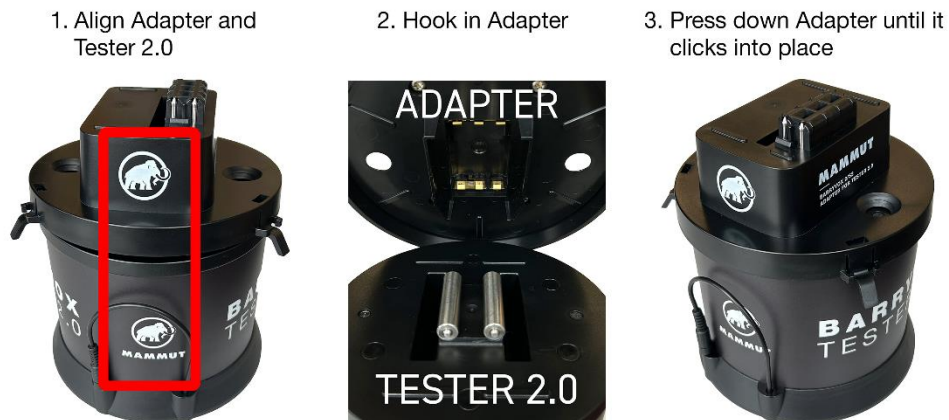


Figure 1 Connecting the adapter to the tester 2.0



Figure 2 Attaching the Barryvox to the adapter

1.4 Compatibility

The Barryvox Maintenance Software 2.0 is only compatible with the Barryvox 2 and Barryvox S2 models. Other Barryvox devices are not recognized by the software. The Barryvox 2 and Barryvox S2 use Bluetooth, which is why the Barryvox USB stick for Barryvox 2 & S2 (Bluetooth) is required for connection. W-Link sticks used for older Barryvox models are not compatible with this software. An overview of all Barryvox devices and the associated maintenance tools can be found at [Barryvox.com](https://www.barryvox.com).

2 Barryvox Maintenance Software 2.0

The Barryvox Maintenance Software 2.0 enables the user to efficiently manage, configure and maintain multiple Barryvox devices simultaneously with one computer. The maintenance software offers the following functions:

- 1. update the firmware:** Update the device to the latest version.
- 2. device configuration:** One device for all needs. Whether beginner, professional, rental devices, organizations.
- 3. load user-defined start image & owner information:** Custom appearance for rental devices, organizations, theft protection.
- 4. fleet and quality management:** management and configuration of multiple devices including self-test, battery level, logging.
- 5. function test:** complete device test of all safety-relevant functions.

2.1 Software

2.1.1 System requirements

	System requirements
Operating system	Windows 10 64-bit
Memory	4GB RAM
Disk space	500 MB free disk space
Resolution	1280 x 720
Interfaces	USB (2x), Fleet management only: USB (1x)

2.1.2 General Information

The Barryvox Maintenance Software 2.0 can be downloaded free of charge from [Barryvox.com](https://www.barryvox.com). It is only available for Windows operating systems.

In order to always have access to the latest Barryvox firmware and to be able to use all functions of the maintenance software, we recommend using the software on a PC with an Internet connection.

To establish a connection with a Barryvox, connect a USB stick for Barryvox 2 & S2 to your PC. The USB stick and tester should be connected directly to your PC via USB. If a USB hub is used, this may result in the software not recognizing the stick or tester correctly.

Make sure that there are no other electronic devices in the immediate vicinity of the tester that could falsify or interfere with measurements with the tester.

When switching on a Barryvox for the first time, the language selection is displayed. The selection must not be made while the connection is being established with the maintenance software, otherwise the connection will be aborted. The language selection must also not be made during the function test.

2.1.3 Updates

To check whether a new version of the Barryvox Maintenance Software 2.0 is available, select "Check for updates..." in the menu bar under "Help" and follow the further instructions.

2.1.4 Navigation

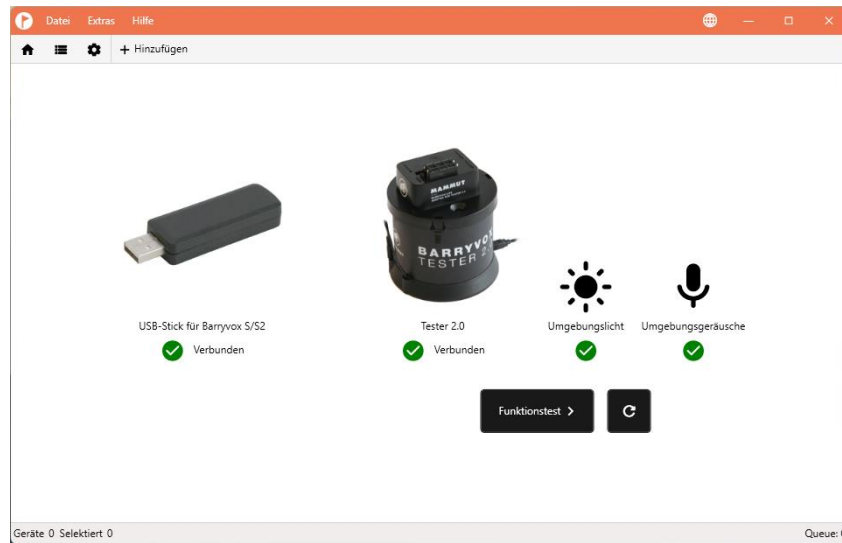


Figure 3 Maintenance Software 2.0 start page

When you start the maintenance software, you will be taken to the start page of the software. All software functions are easily accessible from here. In the middle of the window is an overview of the connected service tools. The green tick indicates that the tester 2.0 or the Barryvox USB stick is connected correctly. To the right of the connection indicator for the tester is the ambient light indicator, which shows whether there is sufficient ambient light for a function test. The ambient noise indicator is also located there. To be able to carry out a function test successfully, all three indicators must have a green tick. If this is not the case, reconnect the tester to the computer or adjust the ambient light or ambient noise. Then click on the refresh button to check the ambient light and ambient noise again.



Figure 4 Menu bar



Figure 5 View control interface

The Barryvox Maintenance Software 2.0 has several menus to access the various functions of the software. Figure 4 shows the menu bar. The functions of the menu bar are explained in more detail in the following paragraphs. The view control interface are shown in Figure 5. This interface can be used to switch between the start page, the device overview and the settings overview.

2.1.4.1 File menu

The following functions can be found in the File menu in the menu bar.

- **Save device list:** This option exports a list of the currently connected devices. This list contains all important settings and information about the devices. The list is saved as a csv file.
- **Open test report folder:** This function opens the file path under which the test reports are stored. This path can be customized in the settings.
- **Open firmware update report folder:** This function opens the file path under which the firmware update reports are stored. This path can be customized in the settings.
- **Exit:** This terminates the software.

2.1.4.2 Extras

- **Update USB Stick for Barryvox 2/ S2:** This function checks for updates and installs the latest firmware for the USB stick for Barryvox 2 and S2.
- **Update Tester 2.0:** Diese Funktion updatet den Barryvox Tester 2.0 auf die neuste Firmware.
- **Settings:** öffnet das Einstellungsfenster.
- **Recovery Add:** If a Barryvox has been unexpectedly disconnected from the computer during the firmware update, or if the power supply to the Barryvox or the computer has caused the firmware update to be interrupted, this can lead to an error state in the device. Nothing will then be shown on the Barryvox display and regular beeps will be emitted. If the Barryvox is in this state, this may mean that the device can no longer be added as usual via the action menu. In this case, select the Rescue add option. The device should now be detected and the firmware update can be repeated.

2.1.4.3 Help

- **Support:** opens the support website for all Barryvox service tools and software. In addition to the maintenance software, this user manual and a compatibility overview can also be downloaded from the website.
- **Check for updates:** Checks for updates and installs the latest version of Barryvox Maintenance Software 2.0.

2.1.4.4 Language

The Barryvox Maintenance Software 2.0 can be used in English, German, French and Italian. The language can be changed at any time using the language selection on the right-hand side of the menu bar.



Figure 6 Language selection

2.1.5 Settings

The settings window is displayed when the program is started for the first time or can be accessed via “Extras” in the menu bar. All settings are explained below.

2.1.5.1 General

- **Start software with system language:** If this option is active, the Maintenance Software 2.0 is always started in the system language.
- **Maintenance Date:** If a function test is carried out, the next maintenance date must be set. Predefined options “1 year” and “3 years” are available for this. A user-defined maintenance interval can also be set.

2.1.5.2 Directories

- **Test reports** All test reports created with this software are stored under this path. The path can be customized by clicking on the button.
- **Firmware update reports:** All firmware update reports created with this software are stored under this path. The path can be customized by clicking on the button.
- **Settings:** Settings saved from a Barryvox device are stored under this path.

2.1.5.3 Terms of Service

The General Terms and Conditions describe the correct handling of the Maintenance Software 2.0. They must be accepted before using the software.

2.1.5.4 Profile

An organization or service center can enter their contact details in the profile setting. These are then automatically printed on every test report of a function test and on all firmware update reports.

2.1.5.5 Overview system

All important information on the software version, license and status of the service tools is displayed in the system overview. An organization license is required for certain functions; this can be requested from Mammut.

2.2 Device manager

The device manager is the central management overview of the program. To display the device manager, select the device overview in the views button at the top left of the program.

2.2.1 Actions

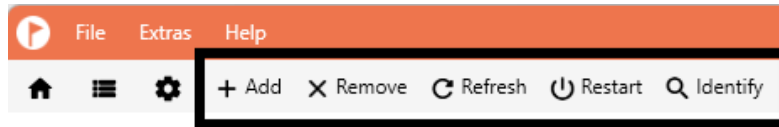


Figure 7 Action menu in the device manager

All actions that are available in the device manager are marked in Figure 6. To add devices to the list, press “**Add devices**” and then switch on the devices one after the other. Once all devices have been switched on, end the entry and wait until all settings have been read out and displayed. Further actions can only be carried out once all the data has been created. Depending on the number of devices, this may take some time.








- + To add further devices, press “**Add**” again and switch on the additional devices.
- X Devices that are switched off can be deleted from the list using the “**Remove**” function.
- ↻ The “**Refresh**” function updates the list of connected devices. If a device has been switched off in the meantime or the connection has been interrupted, this will be displayed in the device overview.
- ⏻ All selected Barryvox devices are restarted using the “**Restart**” function.
- 🔍 To identify an individual device from the list, a sound signal can be emitted on the selected Barryvox using the “**Identify**” function.

2.2.2 Device-overview

All important information about the connected Barryvox can be viewed in the device overview. The device overview can be customized by arranging the columns in a freely selectable order. To move a column, click on the column title, hold down the mouse button and drag the column to the desired position.

2.2.2.1 Status icon

The status display shows the current status of the connection to the device. The following table shows how they are to be interpreted.

Status icon	Explanation
	Firmware Download
	Restart device
	Synchronisation problem
	Connected and communication active
	Device communication in progress
	Device communication problem
	Ready for action

The following information can be found in the rest of the device overview.

Column	Explanation
Status icon	Displays the status of the connected devices.
Serial number	Serial number of the Barryvox
Inventory number	Self-selected inventory number for managing many devices
Self test	Result of the last self-test, which is performed automatically when the Barryvox is switched on.
FW	Firmware version of the device
HW	Hardware version of the device
Info	Model name of the device
Bootloader	Bootloader version
Battery	State of charge of the batteries
Battery type	Type of batteries used (alkaline, lithium, unknown)
language	Language set on the device
Manufacturing Date	Date of manufacture of the Barryvox
Group test distance	Intended distance for group test (1m for tours on foot, 5m for snowmobile)
Bluetooth	Bluetooth activated on the device
Pro search	Pro search activated
Acoustic guidance	Acoustic guidance (digital or analog)
Guidance in the fine search	Guidance method in the fine search (guided, unguided)
Pro check	Show option for professional test during group test
Auto revert from SEARCH to SEND	Automatic switching from SEND to SEARCH after inactivity
Time for auto revert to SEND	Selection between 4 and 8 min for automatic switchover
Vital data	Sending of vital data is activated
FW BLE version	Firmware version of the Bluetooth Low Energy function
Bootloader BLE version	Version of the BLE bootloader
GUI version	Version of the Graphic User Interface
Audio version	Version of the audio functions
Family	Model family of the Barryvox
show group test	Show or hide group test option on the device
show device settings	Show or hide settings menu on the device
Show Service Info	Show or hide maintenance information on the device

Column	Explanation
Voice guidance	Voice guidance activated on the device
Silent mode	Device is muted when switched on and in SEND mode.
Dark mode	SEND LED does not flash in SEND mode

2.2.3 Firmware update

To perform a firmware update on a Barryvox, connect the Barryvox. Then go to the device settings. The latest firmware is automatically loaded onto the selected Barryvox device via the “Update” function. Under no circumstances should you switch off the Barryvox or remove the batteries during the firmware update. At the end of the update process, a firmware update report is created containing all important information.

2.2.4 Device settings

The gear button at the top left of the menu bar takes you to the device settings of the device manager. All customization options that can be made to the Barryvox devices via the software are explained below. Some of these functions require a special license. When making changes to the device settings, the user must be expressly informed of any deviations from the factory settings. In addition, the general terms and conditions of the Maintenance Software 2.0 must be observed for all adjustments. To apply the settings made to the selected device, confirm the selection using the “apply changes” button.

2.2.4.1 Start up picture & owner information

With Barryvox S2 devices, an individual start image can be set, for example an organization logo. Information about the owner can also be saved and displayed when the device is switched on. To do this, an image and the corresponding text can be inserted in the fields provided in the “Startup” area. The image is converted into a black and white image to be shown on the Barryvox S2 display. A preview of the start image is available in the maintenance software. The images that are loaded into the Maintenance Software as the start image must be in bmp, jpg or png format. When inserting the owner information, line breaks must be inserted by the user. A preview of the text on the Barryvox is also displayed in the software.

2.2.4.2 Language

The language of the device can be customized. All available languages are available for selection, as well as the option of allowing the user to select a language the first time the device is switched on. The language selection can also be deactivated in the device settings.

2.2.4.3 Advanced Settings

The advanced functions of the Barryvox device can be configured in this option. These advanced settings can also be hidden on the device. The following settings can be adjusted.

- Pro search
- Accoustic Guidance
- Fine Search Guidance
- Pro Check
- Auto-Revert from SEARCH to SEND
- Time for Auto-Revert to SEND
- Vital data

These functions are explained in detail in the reference manuals for Barryvox 2 and S2. The reference manual can be downloaded from Barryvox.com.

2.2.4.4 Group Check Distance

Different distances between the group leader and the other participants in the group test are useful for different applications of the Barryvox. For activities in the snow on foot (e.g. skiing, snowboarding), a group test distance of one meter should be set. For motorized applications, such as snowmobiles, a distance of five meters is recommended. This setting can also be hidden in the device settings.

2.2.4.5 Hide Factory reset

This setting can be used to prevent the device from being reset to factory settings. The menu option is then not visible.

2.2.4.6 Dark mode

If dark mode is activated, the SEND LED does not light up when the device is switched on and in SEND mode. This option is intended exclusively for use by armed forces or security forces with systematic fleet management.

2.2.4.7 Silent mode

If silent mode is activated, the device is muted when it is switched on in SEND mode. This option is intended exclusively for use by armed or security forces with systematic fleet management.

2.2.4.8 Main menu visibilities

The group test, the device settings and the maintenance information can be hidden on the Barryvox device. This requires an organization licence. The group test may only be hidden if the device is used exclusively in professionally managed groups with systematic fleet management.

2.2.4.9 Service

A self-selected inventory number can be assigned to each device in the maintenance menu. The serial number, firmware version, hardware version and total operating times in SEND and SEARCH mode are also displayed.

2.2.4.10 Save, load and reset settings

In order to be able to configure several devices at the same time, the Maintenance Software 2.0 offers the option of saving and loading the settings of the Barryvox devices. If the desired settings are available on a device, they can be saved and transferred to other devices of the same model immediately or at a later date if required. Please note that when saving the settings, the settings currently available on the device are always saved. Changes to the settings made in the software must first be loaded onto the device in order to take effect in the saved settings.

Once all settings have been made on the selected devices, the changes must be confirmed. By clicking on the “Apply changes” button, the settings on the devices are updated and, if necessary, the device is restarted.

2.3 Function test

The Barryvox Tester 2.0 and the Adapter Tester 2.0 to Barryvox 2/S2 are required for the function test with the Maintenance Software 2.0.

2.3.1 Procedure

- Place the tester in an interference-free and vibration-free environment. It is important that only the Barryvox to be tested is switched on. Also ensure that there is sufficient distance from general sources of interference, e.g. notebook, monitor, cell phone, mobile heater, etc.
- Ensure that the test environment is sufficiently illuminated. The software indicates on the start page whether the test environment is too dark. The function test can only be carried out if the lighting is sufficient.
- Also make sure that no loud noises in the test environment interfere with the function test. This is important for the correct function test of the loudspeaker.
- The function test cannot be started if a previous action is still being performed, such as loading settings. This is displayed in the status bar.

2.3.2 Test steps

The function test checks the functionality of the Barryvox device in 29 steps. All components of the test are listed below.

Step	Test Question	Description
Main switch	Is the main switch or the release button damaged or mechanically inoperable?	
Display (breakage / scratches)	Is the display glass damaged, scratched, discolored or illegible for any other reason?	
Housing and buttons	Are the buttons damaged or mechanically inoperable? Is the housing damaged, cracked or deformed?	
Battery compartment and cover	Is the battery compartment damaged? Is the cover damaged or does it not close properly?	
Battery contacts	Are the battery contacts damaged or do they have residue from leaking batteries? Are the battery contacts deformed in such a way that reliable contact with the battery cannot be guaranteed?	Leaking batteries are a common problem
Switching on the device	Place the device on the tester 2.0 and switch to SEND.	The switch-on process is checked
Read out device information		Device information is read out, details are printed on the test report.
Voltage test		
Power consumption		
Antennas (self-test)		Self-test is carried out
Antennas		Antennas are checked by tester.
Transmit 457kHz frequency		
SEND control LED		
LCD display illumination		
Loudspeaker		Minimum volume of the loudspeaker is checked

Step	Test Question	Description
Ambient light sensor		Ambient light sensor is checked. Make sure there is sufficient lighting
Ambient light sensor (covered)	Cover the upper part of the device and make sure that the SEND LED is completely covered.	Check that the ambient light sensor is covered.
Display (Barryvox S2 only)	Does the display deviate from the checkerboard pattern shown above? Are major pixel errors visible?	
Display (Barryvox 2 only)	Are any segments missing from the display that can be seen in the reference image above? Is a segment too low in contrast or illegible compared to the background?	
Switch SEARCH on and off	Switch the device to SEARCH and then back to SEND	Switching process to SEARCH mode is checked
Up” button	Press the “up” button on the side of the device.	
Down” button	Press the “down” button on the side of the device.	
“MARK” button	Press the “Mark” button on the device	
Insert batteries	Remove the device from the tester 2.0 and insert the batteries. Leave the device switched to SEND.	
Select next maintenance date	Select new maintenance date	Select a new maintenance date. (Max. 3 years in the future)
Switch off devices	Current maintenance date:	The switch-off process is checked.
Further procedure	New maintenance date selected:	
Comment & Observations	Further observations: Are there any other observations that should be noted?	

A test report is automatically exported at the end of the function test. The pass or fail of each individual test step is recorded in the report. The customer or owner must always be informed of the result of the test.

2.4 Troubleshooting

A Barryvox device does not appear in the device overview

- Press “Add” BEFORE you switch on the Barryvox.
- If the device was already switched on: Switch the Barryvox off and then back to SEND while devices are being detected.

A Barryvox device is not responding or the connection has been interrupted

- Switch the Barryvox off and on again. Press «Refresh».
- If there is still no connection, remove the device from the list and add it again.